

# СВІТОВА ЕКОНОМІКА ТА МІЖНАРОДНІ ВІДНОСИНИ

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## OIL EXPLORATION AND THE DILEMMA OF UNEMPLOYMENT IN THE NIGER-DELTA REGION OF NIGERIA

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### Oil Exploration and the Dilemma of Unemployment in the Niger-Delta Region of Nigeria

The Niger delta region situated in the southern part of Nigeria covers a territory of about 112,110 km<sup>2</sup>, which represents about 12 % of the total area of the country. The Niger delta is an oil-rich region, which has led Nigeria to the 12th place among the oil producing countries of the world. The share of crude oil production accounts for 90 % of export revenues and 75% of the total state revenue. However, despite the numerous social and economic achievements of the oil industry, it is considered to be the cause of the unemployment rate growth in the region. Taking into account the abovementioned, the aim of this article is to evaluate the relationship of the crude oil production and high unemployment rate in the Niger Delta. In the article there applied the method of non-experimental research to enable the proportional reflection, method of cluster random choice for distribution of questionnaires and interviewing method for obtaining direct data and information. The results showed that the ecological damage caused by the oil production has had a negative impact on the fishing and agriculture — the main activities of the region rural population. In other words, the threat of oil spills, gas flaring, pollution and other activities associated with oil production are destroying the environment, which is the main home and source of income for a large number of working-age population. Thus, as a result of the depletion of fertile soils, the crop yield drops or completely disappears, forests vanish together with their resources. Rivers and reservoirs are being polluted resulting in the extinction of fish and river fauna, which, in turn, leads to the fact that fishermen and farmers, whose work is directly dependent on environmental conditions, are affected by unemployment. This causes a widespread poverty, unrest and hostile attitude of among young people, as well as the emergence of other social problems prevailing in the region. Unfortunately, the years of neglecting the problem of multinational oil companies, on the one hand, and the lack of a clear state policy of the national government regarding the problem settlement, on the other hand, only increasingly aggravate the problem.

**Keywords:** unemployment, Niger, delta, poverty, youth, agitation, militancy, oil production.

**Fig.:** 7. **Tabl.:** 4. **Bibl.:** 19.

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### Нвосу Дж. Э. Разведка нефти и дилемма безработицы в дельте реки Нигер в Нигерии

Дельта Нигера, расположенная в южной части Нигерии, занимает площадь около 112,110 км<sup>2</sup> и составляет около 12 % от общей площади страны. Дельта Нигера – богатый нефтью регион, который вывел Нигерию на 12-е место среди нефтедобывающих стран мира. Доля добычи нефти составляет 90 % от экспортных поступлений и 75 % от общих поступлений в бюджет страны. Однако, несмотря на многочисленные социальные и экономические достижения нефтедобывающей промышленности, именно она считается причиной роста уровня безработицы в регионе. Принимая во внимание вышесказанное, цель этой работы – оценить взаимосвязь добычи нефти и высокого уровня безработицы в дельте реки Нигер. В статье применен метод неэкспериментального исследования для возможности пропорционального отображения, метод кластерного и случайного выбора – для распространения анкет, а также метод интервьюирования – для получения непосредственных данных и информации. Результаты показали, что экологическое разрушение, вызванное добычей нефти, негативно повлияло на рыболовство и земледелие – основные виды деятельности сельского населения региона. Иными словами, угрозы разлива нефти, сжигание попутного газа, загрязнение и другая деятельность, связанная с добычей нефти, уничтожают окружающую среду, от которой зависит большое количество работоспособного населения, для которых это – основная среда обитания и источник доходов. Таким образом, в результате истощения плодородных почв урожайность падает или вообще исчезает, исчезают леса, а с ними – и их ресурсы. Реки

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### Нвосу Дж. Е. Розвідка нафти та дилема безробіття в дельті річки Нігер у Нігерії

Дельта Нігеру, що розташована у південній частині Нігерії, займає площу близько 112,110 км<sup>2</sup> і складає близько 12 % від загальної площі країни. Дельта Нігеру – регіон багатий на нафту, що вивів Нігерію на 12-те місце серед нафтовидобувних країн світу. Частка видобутку нафти складає 90 % від експортних надходжень і 75 % від загальних надходжень до бюджету країни. Однак, незважаючи на численні соціальні і економічні здобутки нафтовидобувної промисловості, саме вона вважається причиною зростання рівня безробіття у цьому регіоні. Беручи до уваги вищезгадане, мета цієї роботи – оцінити взаємозв'язок видобутку нафти та високого рівня безробіття в дельті річки Нігер. У статті застосовано метод неекспериментального дослідження для можливості пропорціонального відображення, метод кластерного та випадкового вибору – для розповсюдження анкет, а також метод інтерв'ювання – для отримання безпосередніх даних та інформації. Результати показали, що екологічна руйнація, спричинена видобутком нафти, негативно вплинула на рибальство та землеробство – основні види діяльності сільського населення регіону. Іншими словами, загрози розливу нафти, спалювання попутного газу, забруднення і інша діяльність, пов'язана з видобутком нафти, знищують довкілля, від якого залежить велика кількість працеспособного населення, для котрого це – основне середовище існування і джерело доходів. Таким чином, внаслідок виснаження родючих ґрунтів урожайність падає або взагалі зникає, зникають ліси, а з ними – і їх ресурси. Ріки та водоймища забруднюються, що призводить до

и водоемы загрязняются, что приводит к вымиранию рыбы и речной фауны, а это, в свою очередь, к тому, что рыбаки и фермеры, чья работа напрямую зависит от состояния окружающей среды, страдают от безработицы. Как следствие – широкое распространение бедности, волнения и враждебной настрои среди молодежи, а также возникновение других социальных проблем, преобладающих в этом регионе. К сожалению, годы небрежного отношения к проблеме мультинациональных нефтяных компаний с одной стороны и отсутствие четкой государственной политики урегулирования ситуации со стороны национального правительства только все больше усугубляют проблему.

**Ключевые слова:** безработица, Нигер, дельта, бедность, молодежь, агитация, воинственность, добыча нефти/

**Рис.: 7. Табл.: 4. Библ.: 19.**

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вимирання риби і річкової фауни, а це, у свою чергу, до того, що рыбаки та фермери, чия праця напряму залежить від стану довкілля, страждають від безробіття. Як наслідок – широке розповсюдження бідності, хвилювання і панування ворожого настрою серед молоді, а також поява інших соціальних проблем, що переважають у цьому регіоні. На жаль, роки недбалого ставлення до проблеми мультинаціональних нафтових компаній з одного боку та відсутність чіткої державної політики врегулювання ситуації з боку національного уряду тільки все більше поглиблюють проблему.

**Ключові слова:** безробіття, Нигер, дельта, бідність, молодь, агітація, войовничість, видобуток нафти/

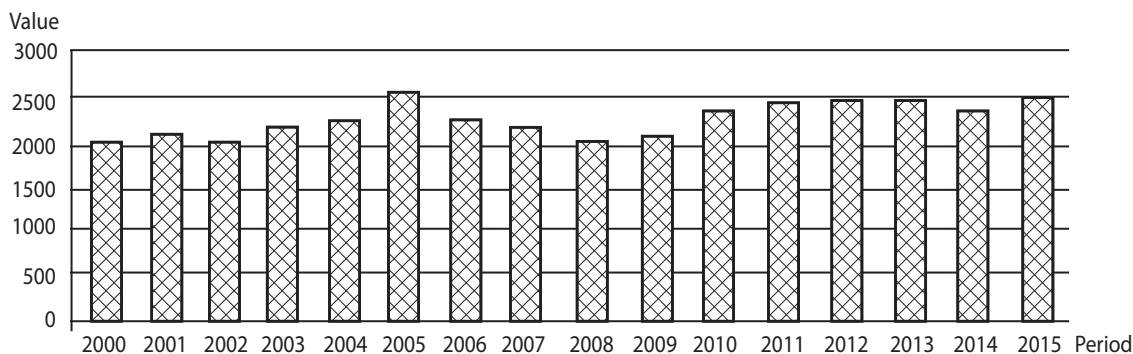
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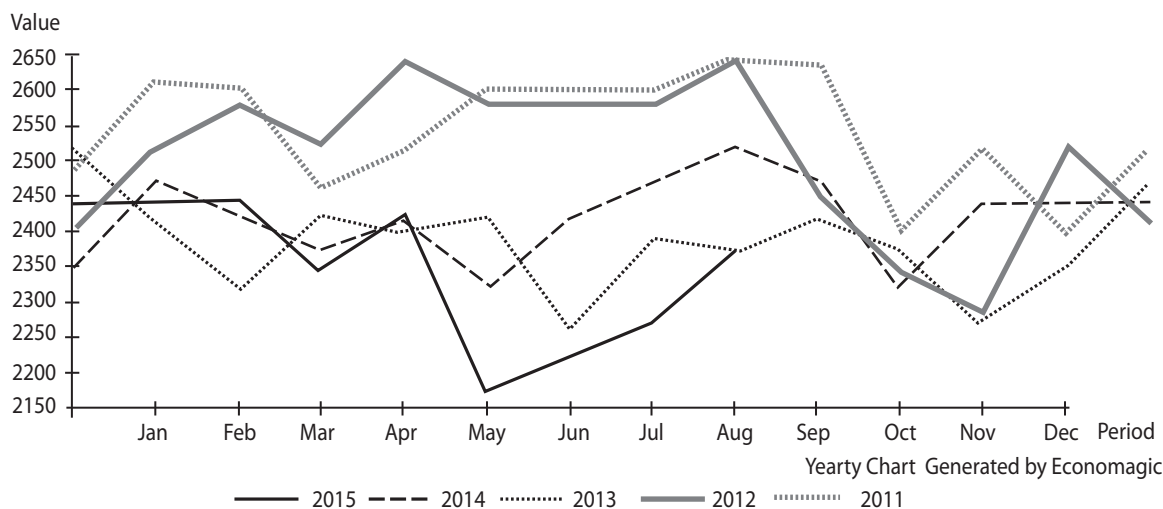
The Niger delta region is made up of 9 constituent states of Nigeria, namely: Abia, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Imo, Ondo and Rivers with the population of about 33.7 million people. It covers a territory of about 112,110 km<sup>2</sup>, which represents about 12 % of Nigeria total surface area. The region encompasses about 60 % of Africa's largest mangrove

forests and stretches over 20, 000 km<sup>2</sup> swamp of the littoral fringes of Nigeria [1]. The Niger delta region is unique in the history of Nigeria because it is abundantly and naturally endowed with vast deposit of oil and gas with proven oil reserve, hence, the Nigerian economy is heavily dependent on the oil sector [2].



**Fig. 1. Oil production chart in Nigeria for the period of 2000–2015**

Source: [3]



**Fig. 2. Movement Chart of Nigeria Oil Production for the period of 2010–2015**

Source: [4] Yearty

Figures 1 and 2 showed consistency in oil production in Nigeria with 2005, 2010 and 2011 having the highest production of 2,627; 2,550 and 2,520 thousand barrel per day respectively.

Over the years, oil and gas production has become the mainstay of Nigerian economy as their earnings are used for infrastructural development as well as advancing the growth of the economy [5]. The petroleum exports revenue represents about 90 % of the total exports revenue, 65 % of government revenues and finances, about 80 % of the national budget. Ni-

geria has an estimated petroleum export rate of 1.9 Mbb/d (300,000 m<sup>3</sup>/d), with a projected sales price of \$114.21 per barrel in 2012. Thus, oil revenues totaled \$52.2 billion in the same year and generated about 71% of government revenues [6].

The natural gas reserves from the Niger delta region account for 5.2 trillion cubic meters making Nigeria the world's 7<sup>th</sup> largest gas resource and making up 10 % of the world's international liquid natural gas supply.

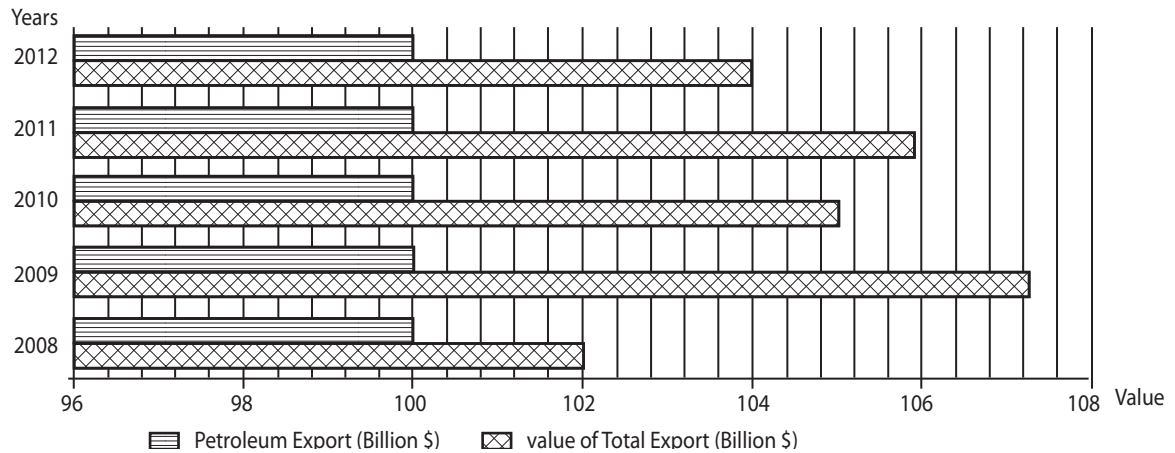


Fig. 3. Petroleum export and the value of total export in Nigeria for 2008–2012 [7]

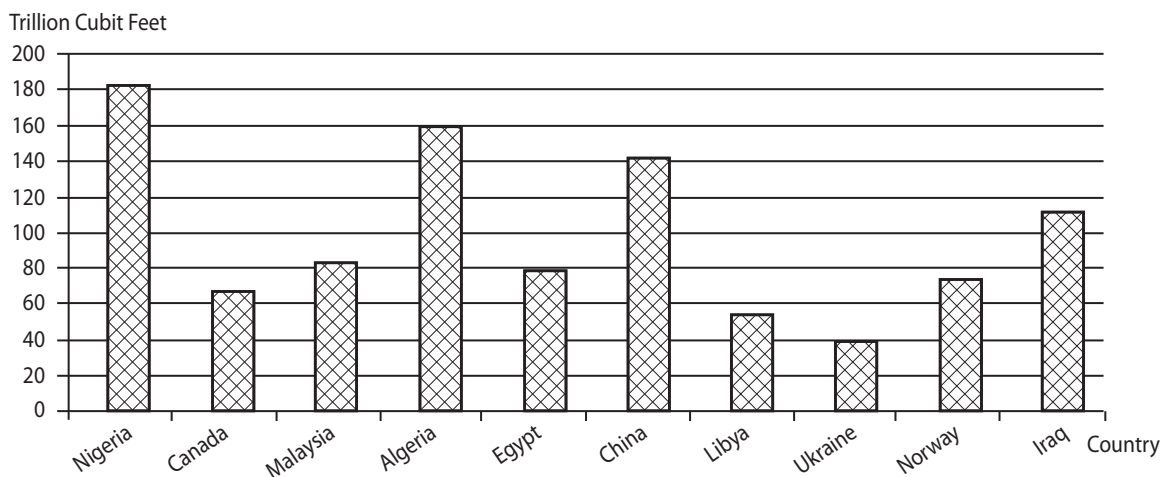


Fig. 4. Natural gas reserves of selected countries [8]

Oil and gas production has been of immense contribution to the Nigerian state, triggering its economic growth and development. Crude oil and gas production has come to be the main stay of the Nigerian economy. Thus, the economy is heavily dependent on the oil and gas supplies, which are solely produced from the Niger-delta region. To put it differently, the high revenue generation, and growth of the Nigerian economy have a close tie with the Niger-delta region.

**CORRELATIONS BETWEEN OIL EXPLORATION AND HIGH RATE OF UNEMPLOYMENT.** The level of unemployment and underemployment is higher in the core states of the Niger delta than in any other regions of Nigeria. For example, it is estimated that 40 % of youths of this region are unemployed [9]. This in fact is alarming, not only because it affects the economic status of people but is a pivot to social vices including youth restiveness, militancy and all other forms of agitations characterizing the region. As a consequence, the

region performs poorly in terms of social indicators, such as education, health, mortality rate, quality of natural environment, human development, etc.

Unemployment in this context is defined as a state of not being actively engaged in job, trade or any personal handiwork that earns wage or monetary gain. According to the ILO, the unemployed population is made up of persons above a specified age, who are able to, but did not furnish the supply of labour for the production of goods and services. When measured for a short reference period, it relates to all persons not in employment, who would have accepted a suitable job or started an enterprise during the reference period should the opportunity arose, and who had actively looked for ways to obtain a job or start an enterprise in the near past [10]. Thus, it entails a situation, where someone of the working age, who is searching for full employment, is not able to get a job, be engaged in trading or any other activity.

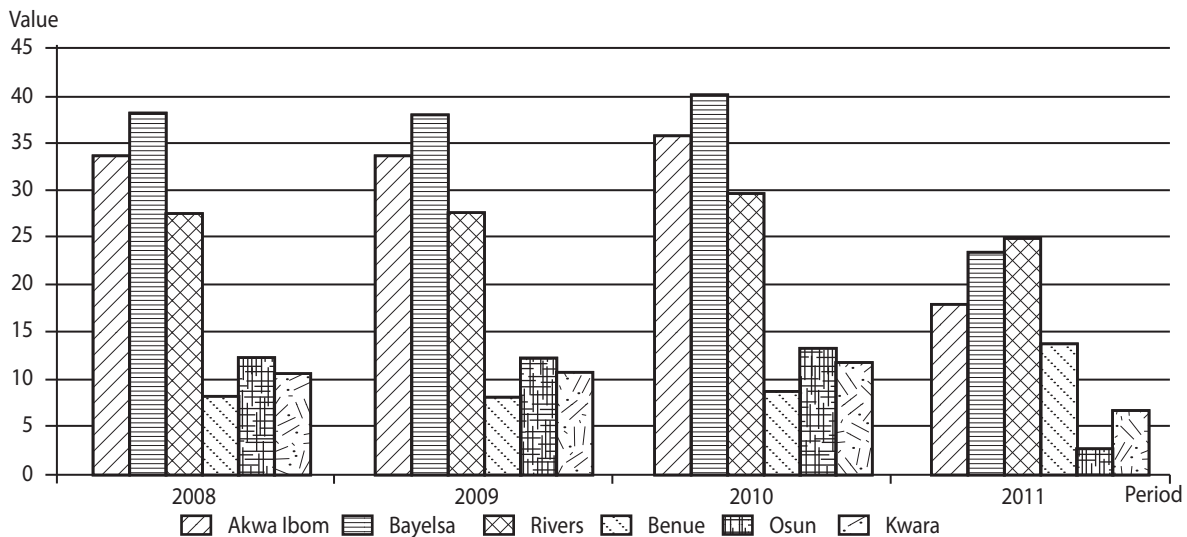
Unemployment rate could be determined by the following equation:

$$\sum_{n=1}^{\infty} \left( t_n \frac{EW}{LF} \times \frac{100}{1} \right)$$

Where  $t_n$   $EW$  – Total number of employed workers  
 $t_n$   $LF$  – Total number of labour workforce

Summarily, the difference between employed working population and the total workforce determines the unemploy-

ment rate. This does not include low skilled employment and underemployment. The statistics have shown that increasingly higher percentages of the population of the Niger-delta, who are of the working age, are unemployed. This has been attributed to the depletion of natural resources and the degradation of the environment, upon which the means of livelihood of the local people are sustained. It is ironical to say that some core Niger-delta states, which earn much revenue to the federal account through oil and gas production, record the highest rate of unemployment in Nigeria among the others (see Fig. 5).



**Fig. 5. Unemployment rate in oil producing states compared to non-oil producing states in Nigeria, 2008–2011**

Figure re-presented by the author. Note: States with asterisk are non-oil producing states [11]

The figure reveals that Akwa Ibom, Bayelsa and Rivers – oil producing states of the Niger-delta region – had higher rates of unemployment as compared to Benue, Osun and Kwara, which are non-oil producing states. Akwa Ibom has the rate of 34.1, 34.1, 36.1, 18.4; Bayelsa – 38.4, 38.4, 40.1, 23.9; and Rivers has the unemployment rate of 27.9, 27.9, 29.9, 25.3 for 2008, 2009, 2010, 2011 respectively. Whereas, Benue records the rate of 8.5, 8.5, 9.5, 14.5; Osun – 12.6, 12.6, 13.6, 3.0 and Kwara has the unemployment rate of 11.0, 11.0, 12.0, 7.1 respectively. The reason is obvious – farmers and fishermen, whose employment and means of livelihood are tied closely to nature and the environment, make up a larger share of the working population in this region.

The Niger-delta economy is predominantly an agro-centered economy with farming and fishing as the main source of livelihood. This is because the ecosystem of the area is highly diverse, rich in biodiversity with arable and cultivable land that is supportive of numerous species of terrestrial and aquatic flora and fauna [12]. Mangrove swamps, fresh water swamps and lowland rain forest are all natural features of this region. Being massively endowed with natural resources, a larger number of the population is dependant on these resources and the environment for means of livelihood and economic sustenance. To put it differently, majority of the working population of this region are employed by nature. Paul Francis in his research work showed the distribution of working population by activities in Niger-delta (see Fig. below).

The figure above shows that 48 % of the working population is involved in agriculture (farming/fishing) and 20 % is

engaged in trading. 9 %, 7 %, 5 %, 4 %, 3 %, 2 % is engaged in services, education/health, public administration, transport, manufacturing and construction sectors respectively while 2 % is involved in other minor sectors.

It is obvious from this distribution that anything that affects the environment, upon which agriculture (farming and fishing) strives in this region, definitely affects a greater portion of the working population and their sources of employment and livelihood. In the field survey carried out by the author, the relationship between oil exploration/production and unemployment is highlighted (see Fig. 7)

It is observed from the figure above that the three main features of oil production – oil spill, building of flow lines and stations and gas flaring – in the Niger-delta have got an extended or multiplier effects. The Niger-delta area is located at the coastal riverine area. One of the major oil induced water pollution is oil spill. With the expansion of oil production and deep-sea exploration, the incidents of oil spills have greatly increased. Available statistics shows that from 1991 to 2011, approximately 4 million barrels of oil has been spilled. This invariably has led to the extinction and depletion of the aquatic diversity, leaving fishermen, whose source of livelihood and employment is based on the services associated with the aquatic fauna, with little or nothing to leave for. Similarly, cultivable land and soil fertility in this region are continuously lost due to oil spills and land degradation, thus affecting the farm product and income of the people. In a study carried out by Mmom and Igwe there mentioned that a total of about 818.4 square hectare of land was lost as a result of oil exploration activities in 7 com-

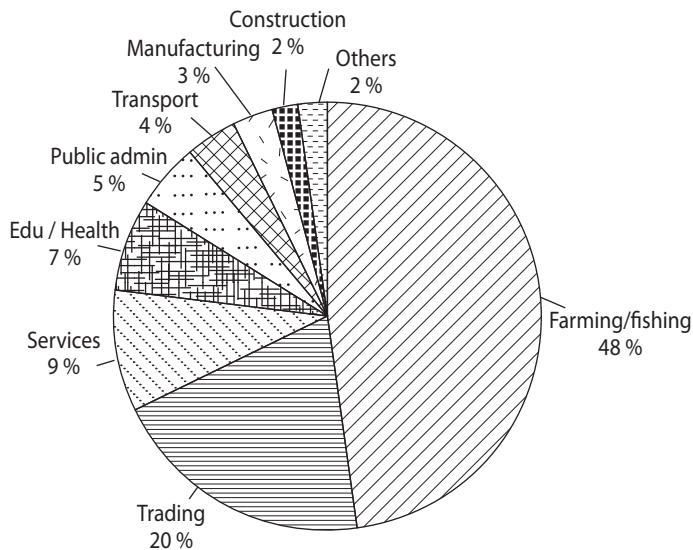


Fig. 6. Distribution of working population by activities in Niger-delta [13]

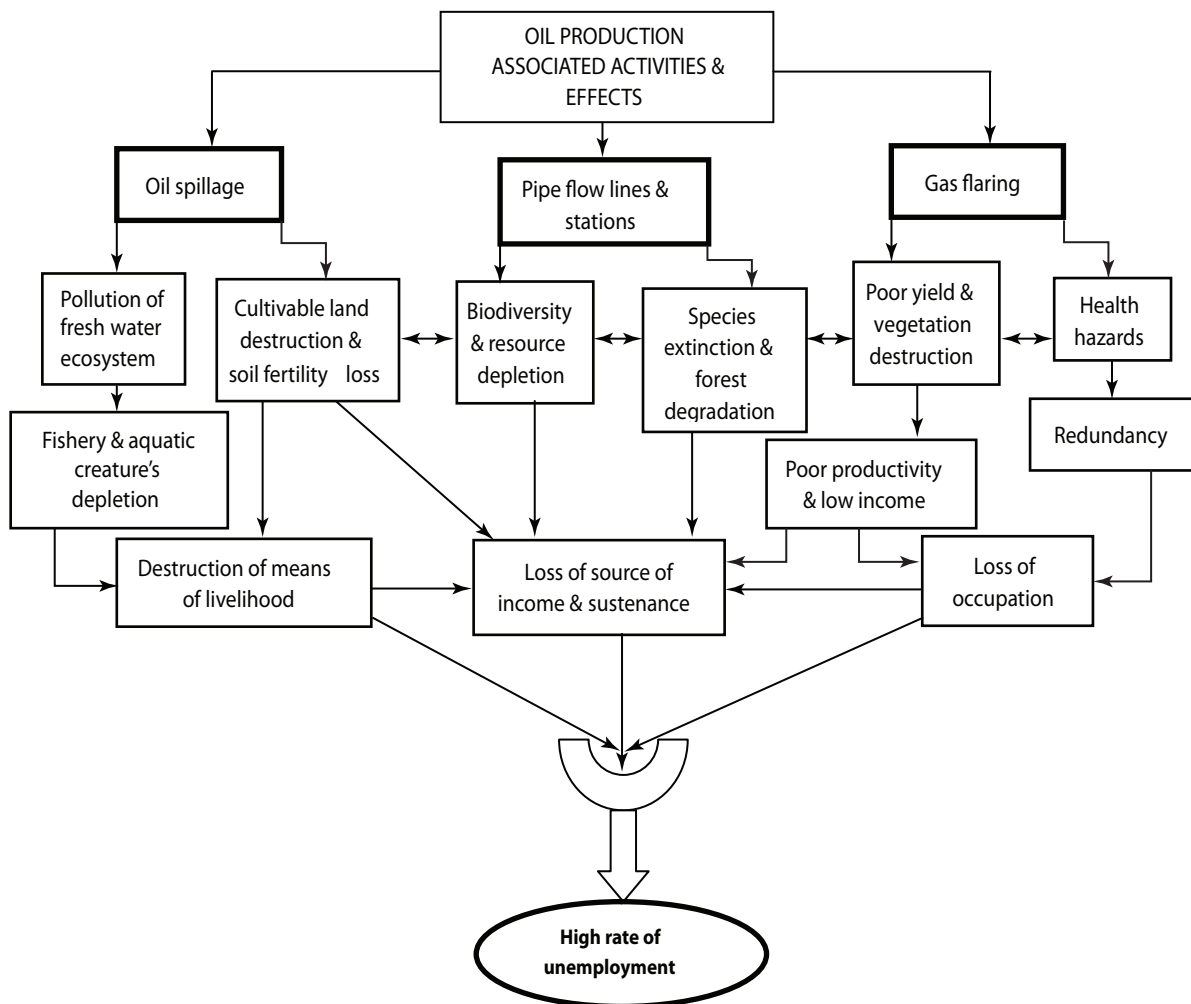


Fig. 7. The tree relationship between the oil production and high rate of unemployment in the Niger-delta

Source of the data: Author's field survey, 2015

munities of Niger-delta region namely: Bolo Iwokiri, Mbikiri, Agokien, Ele, Oraberekiri and Wakama [14].

Again, forest and forest resources remain very important to the indigenous people of Nigeria as well as to the various

Table 1

## Poverty statistics of the Niger-delta states

States	Absolute Poverty	Relative Poverty
Abia	57.4	63.4
Akwa Ibom	53.7	62.8
Cross River	52.9	59,7
Delta	63.3	70.1
Edo	65.5	72.5
Imo	50.5	57.3
Ondo	45.7	57.0
Rivers	50.4	58.6
Nigeria	60.9	69.0

Table re-structured by the author  
Source: [15]

organisms that inhabit these ecosystems. Unfortunately, the oil exploration activities have destroyed much of the mangrove forests and depleted biodiversity especially at ramp sites, flow station and terminals. Most of these stations are characterized by wide fire outbreaks, which do not only destroy the natural ecology but human lives as well. Responding to interview questions, an agriculturist from Pebidaba community of Bayelsa state, where one of the oil flow stations is located stated the following:

“There is no good cultivable land again, but there is a noticeable extinction of species. There is no vegetation. All the bush animals have run away to other places because of cutting down of forest and the big fire that burns every day (referring to gas flaring), the heat and noise that come out of it. This is terrible for people like me, who make a living from agriculture... I've stopped farming because the farmlands in this community are no longer fertile. All we have is poor yield. Now, I'm left without any source of livelihood. Oil has spoilt everything”

This statement clearly captured the correlation of the oil production and unemployment in Niger-delta. It describes the position of the local people, whose sources of livelihood have been affected negatively as a result of oil production. This is the problem!

**MULTIPLIERS EFFECT OF UNEMPLOYMENT IN THE NIGER-DELTA.** One of the direct consequences of loss of employment and source of livelihood in this region is the alarming rate of poverty. This results from the great mismanagement and destruction of the natural wealth of the region. To put it differently, these oil producing communities have remained poor, underdeveloped and devastated by environmental and health hazards. Majority of the people live for beyond \$1.25 per day, which is the World Bank standard measurement of poverty. The people do not have food and other life basic amenities because they can't afford it due to the fact that they do not have means of income. (See Table 1)

In an attempt by oil producing communities to seek for

redress against the alleged neglect by government and the oil multinationals, all forms of agitations, tension and violence are used in the regions. The most serious of these is youth restiveness and militancy, which include hostage taking/kidnapping for ransom, armed conflict and violence by ethnic militia, illegal bunkering and bombing of oil installations, etc. The agitated youths more often than not direct their violent protests at oil conglomerates because the latter are perceived not just as the direct culprits in their plight but also as the most proximate government agents [16]. The resultant effect was loss of lives and jeopardy to the security and safety of the people in the region. These were some of the multipliers effects of the increased rate of unemployment among the oil producing communities of the region. The results of afield survey confirmed this fact (see Table 2).

**RESULTS AND CONCLUSION.** The survey design, which is a non-experimental research design, was adopted. This provided a proportional representation of data. The clus-

Table 2

## Selected Cases of Abductions/Kidnapping for Ransom

S/N	Action	Multi National Co. / Oil Servicing Co.	Youth Group/ Ethnic Militant	Ascertained Purpose
1	Hostage taking of 10 workers	Shell	Militant Youth Gang, Ekeremor LGA, Ijaw / Bayelsa State	Ransom Demand of NGN 3.1m
2	Kidnapping of oil Co. staff		Militant Youth Gang, Ekeremor LGA, Ijaw / Bayelsa State	Demand of NGN 25.4m
3	Kidnapping of 9 crew & 4 military escorts of oil barges	Oil Servicing Co. working for Shell	Ijaw Militants	Ransom/Other demands
4	Kidnapping of 14 workers	Chevron Texaco	Militant Ijaw youths/ Bayelsa State	Ransom demands
5	Kidnapping of 19 oil workers	Nobel Drilling / Prospecting	Ijaw Militias / Delta State	Delta State Ransom demands
6	Bredero Shaw Oil Servicing Co. (Shell)	Militant Ijaw Youths / Delta State	Ransom demands of USD 5m	
7	Chevron Texaco	Militant youths along Benin River area/ Delta State		

Source: [17]

ter sampling technique was applied, hence, the study involves different communities in the Niger-delta region and a systematic random sampling was used to distribute questionnaires to respondents in different communities.

Table 1 shows poverty statistics of Niger-delta states categorized by absolute and relative poverty. Absolute poverty is defined as minimal requirements necessary to afford minimal standards of food, clothing, healthcare and shelter whereas relative poverty captures the living standards of majority in a given society [18].

The result of the survey questions in Table 2 – Reasons for the alarming rate of poverty – shows that 11 % of the respondents believe it is lack of quality education, while 49 % see destruction of natural sources of livelihood and lack of job op-

portunities as the reason. 16 % and 24 % see the global economy depreciation and population growth respectively as the causes. The respondents were grouped within age brackets of 17–30, 31–45 and 46–60.

Table 3 – Reasons for the high incidence of social vices and youth restiveness, shows that 10 % and 20 % of the respondents attributed the reasons to breakdown of law and order, irresponsibility and poor orientation respectively. While 70 % believes it is a result of high level of unemployment. The respondents were grouped according to the work status – employed and unemployed.

The unsustainable activities of the oil industry in the Niger delta, as evidenced, aggravated the crisis between the host communities and the oil multinationals. This is a result of the

Table 3

Results of the structured sociological questionnaire – Reasons for the alarming rate of poverty in this region

Respondents By age brackets	Lack of quality education	Destruction of natural sources of livelihood & lack of job opportunity	Global economy depreciation	Population growth	Total
Ages 17–30	2	18	5	8	33
Ages 31–45	6	20	5	10	41
Ages 46–60	3	11	6	6	26
Total	11	49	16	24	100

Source: the authors field survey, 2015

Table 4

Results of the structured sociological questionnaire – Reasons for the high incidence of social vices and youth restiveness

Respondents by status	Breakdown of law & order	Irresponsibility & poor orientation	High level of unemployment	Total
Employed	6	12	22	40
Unemployed	4	8	48	60
Total	10	20	70	100

Source: the author's field survey, 2015

ecological degradation and destruction of their natural means of livelihood and employment. The agitations spearheaded by unemployed youths posed great security concern for both the region and the Nigerian state. The aftermath is the rise of youth militant groups, who vowed to do nothing but unleashed terror and make the region ungovernable as a way of avenging their perceived injustices. This crisis in the Niger Delta region has been lingering; especially against the backdrop of continued or renewed agitations by the youths of the region.

The Niger-delta natural ecology and environment have suffered much depletion and degradation due to oil and gas exploration and production. The devastation of the environment, upon which larger number of the working population relies for means of income and livelihood, has resulted in a number of multiplier effects on the people and economy of the region. One of the resultant effects is a high rate of unemployment recorded in the region. Not only has unemployment brought wide spread poverty, but it has also exacerbated social vices, which are seen in forms of violence, kidnapping, youth restiveness prostitution, etc. These are desperate acts of desperate people, who have completely lost all sense of hope for a

better future in their region. Taken together, these trends have severely jeopardized the socio-economic growth and development of both the economy and human capabilities in the region [19]. It is not an exaggeration to state categorically that after many decades of oil exploration in the Niger-delta region, the natives have become poorer and less empowered. Every environment is endowed with opportunities and confronted with threats. While the opportunities may be potential (dormant) or actualized (activated), the threats are often more than not man-made. This position derives from the fact that environmental resources in their natural state do not pose any threats to man; it is rather the utilization of the resources through their use or misuse that generates threats [20].

To this effect, sustainable oil exploration should by law be adopted as part of oil exploration and production procedure. To achieve this, it must involve the combine efforts of all stake holders. The Nigerian government and the multi-national oil companies should come up with strong policies that would not only restore hope but improve the standard of living of the people in the Niger-delta region. To this end holistic steps should be taken to adopt the principles of fairness and equity

with the aim of addressing the imbalances in the distribution of environmental benefits and costs in the form of employment and job creation, skill acquisition, health care, educational assistance schemes and other pro-poor life-enhancing programs that are desirable and appropriate.

## LITERATURE

1. Eyinla P. Nigeria: The Travesty of Oil and Gas Wealth / P. Eyinla, J. Ukpo. – Lagos : Catholic Secretariat of Nigeria, 2006.
2. Igbuzor O. Niger-delta Regional Master Plan Assessment Report: Tools and Development Indices / O. Igbuzor ; African Centre for Leadership, Strategy & Development. – Garki ; Abuja, 2010.
3. Annual Energy Outlook with projection to 2040. – 2013 [Electronic resource]. – Access mode : [http://www.eia.gov/forecasts/aeo/pdf/0383\(2013\).pdf](http://www.eia.gov/forecasts/aeo/pdf/0383(2013).pdf)
4. Economagic.com : Economic Time series page [Electronic resource]. – Access mode : <http://www.economagic.com/em-cgi/data.exe/doeme/paprpni>
5. Nwosu J. E. Assessment of Socio-Environmental Challenges of Oil and Gas production in the Niger-delta region of Nigeria / J. E. Nwosu // *Business Inform.* – 2015. – No. 12. – P. 50–60.
6. Nigeria natural resource governance institute. – 2012 [Electronic resource]. – Access mode : <http://www.resourcegovernance.org/our-work/country/nigeria>
7. Organisation of Petroleum Exporting Countries, OPEC : Statistical Bulletin. – 2013 [Electronic resource]. – Access mode: [http://www.opec.org/opec\\_web/static\\_files\\_project/media/downloads/publications/ASB2013.pdf](http://www.opec.org/opec_web/static_files_project/media/downloads/publications/ASB2013.pdf)
8. Natural Gas reserve by country: Index Mundi [Electronic resource]. – Access mode : <http://www.indexmundi.com/energy.aspx?product=gas&graph+reserve&display=rank>
9. Francis P. Niger Delta Social and Conflict Analysis / P. Francis ; Sustainable Development Department Africa Region. – Nigeria, 2008.
10. Olubukola S. A. Unemployment and Security Challenges in Nigeria / S. A. Olubukola // *International Journal of Humanities and Social Science.* – 2013. – Vol. 3, No. 7. – P. 147.
11. Aiyedogbon J. O. Poverty and youth unemployment in Nigeria, 1987 – 2011 / J. O. Aiyedogbon, B. O. Ohwofasa // *International Journal of Business and Social Sciences.* – 2012. – No. 3. – P. 20.
12. Uyigue E. Coping with Climate Change and Environmental Degradation in the Niger-Delta of South Nigeria / E. Uyigue, M. Agho. – Benin : Community Research and Development Centre (CREDC), 2007.
13. Francis P. Niger Delta Social and Conflict Analysis / P. Francis ; World Bank Sustainable Development Department African Region. – Nigeria, 2008.
14. Mmom P. Ch. Environmental Degradation Resulting from Oil Exploitation, and Population Displacement in the Niger Delta, Nigeria / P. Ch. Mmom, Ch. F. Igwe // *Journal of Environmental Science and Engineering.* – 2012. – No. B1. – P. 125–136.
15. National Bureau of statistics. – Nigeria ; Abuja, 2012.
16. Mabro N. *Dangerous liaisons* / N. Mabro. – London : Tempo, 1997.
17. Ikelegbe A. The Economy of Conflict in the Oil Rich Niger Delta Region of Nigeria / Augustine Ikelegbe // *Nordic Journal of African studies.* – 2005. – No. 14 (2). – P. 208–234.
18. Ojatorotu V. Checkmating the Resurgence of Oil Violence in the Niger Delta of Nigeria / V. Ojatorotu, L. D. Gilbert (Ed.) // *Niger delta book.* – 2009. – P. 16.

19. Inyang B. Unemployment and Persistent Poverty in the Niger Delta Region of Nigeria: A Constraint to Sustainable Development in the 21st Century / B. Inyang, E. Simon // *Nigeria Mediterranean Journal of Social Sciences.* – 2012. – No. 3 (2). – P. 27–34.

20. Ejumudo K. B. O. Youth Restiveness in the Niger Delta : A Critical Discourse Sage Journals. – 2014. – P. 13.

## REFERENCES

- “Annual Energy Outlook with projection to 2040” [http://www.eia.gov/forecasts/aeo/pdf/0383\(2013\).pdf](http://www.eia.gov/forecasts/aeo/pdf/0383(2013).pdf)
- Aiyedogbon, J. O., and Ohwofasa, B. O. “Poverty and youth unemployment in Nigeria, 1987 - 2011” *International Journal of Business and Social Sciences*, no. 3 (2012): 20-.
- Eyinla, P., and Ukpo, J. *Nigeria: The Travesty of Oil and Gas Wealth* Lagos: Catholic Secretariat of Nigeria, 2006.
- “Economagic.com : Economic Time series page” <http://www.economagic.com/em-cgi/data.exe/doeme/paprpni>
- Ejumudo, K. B. O. “Youth Restiveness in the Niger Delta” *A Critical Discourse Sage Journals*, 2014.
- Francis, P. *Niger Delta Social and Conflict Analysis* Nigeria, 2008.
- Igbuzor, O. *Niger-delta Regional Master Plan Assessment Report: Tools and Development Indices* Garki ; Abuja, 2010.
- Ikelegbe, A. “The Economy of Conflict in the Oil Rich Niger Delta Region of Nigeria” *Nordic Journal of African studies*, no. 14(2) (2005): 208-234.
- Inyang, B., and Simon, E. “Unemployment and Persistent Poverty in the Niger Delta Region of Nigeria: A Constraint to Sustainable Development in the 21st Century” *Nigeria Mediterranean Journal of Social Sciences*, no. 3(2) (2012): 27-34.
- Mmom, P. Ch., and Igwe, Ch. F. “Environmental Degradation Resulting from Oil Exploitation, and Population Displacement in the Niger Delta, Nigeria” *Journal of Environmental Science and Engineering*, no. B1 (2012): 125-136.
- Mabro, N. *Dangerous liaisons* London: Tempo, 1997.
- “Natural Gas reserve by country: Index Mundi” <http://www.indexmundi.com/energy.aspx?product=gas&graph+reserve&display=rank>
- National Bureau of statistics* Nigeria ; Abuja, 2012.
- “Nigeria natural resource governance institute” <http://www.resourcegovernance.org/our-work/country/nigeria>
- Nwosu, J. E. “Assessment of Socio-Environmental Challenges of Oil and Gas production in the Niger-delta region of Nigeria” *Business Inform*, no. 12 (2015): 50-60.
- “Organisation of Petroleum Exporting Countries, OPEC : Statistical Bulletin” [http://www.opec.org/opec\\_web/static\\_files\\_project/media/downloads/publications/ASB2013.pdf](http://www.opec.org/opec_web/static_files_project/media/downloads/publications/ASB2013.pdf)
- Ojatorotu, V. “Checkmating the Resurgence of Oil Violence in the Niger Delta of Nigeria” In *Niger delta book*, 16-, 2009.
- Olubukola, S. A. “Unemployment and Security Challenges in Nigeria” *International Journal of Humanities and Social Science* vol. 3, no. 7 (2013): 147-.
- Uyigue, E., and Agho, M. *Coping with Climate Change and Environmental Degradation in the Niger-Delta of South Nigeria* Benin: Community Research and Development Centre (CREDC), 2007.